

In this document, the text in ***bold italics*** is quoted directly from the Sand and Gravel general permit. The text in straight type is provided as guidance in the preparation of your SWMP.

The requirement to develop a Stormwater Management Plan (SWMP) prior to application for the general permit applies to **all** facilities. The applicant shall develop a SWMP for their facility, and certify in Item 8 of the application that it has been completed. The SWMP shall be prepared in accordance with good engineering practices. (The plan need not be completed by a registered engineer.)

The plan shall identify potential sources of pollution (including sediment) which may reasonably be expected to affect the quality of stormwater discharges associated with the mining activity. In addition, the plan shall describe and ensure the implementation of Best Management Practices (BMPs) which will be used to reduce the pollutants in stormwater discharges associated with mining activity. BMPs are defined as physical, structural, and/or managerial practices that, when used singly or in combination, prevent or reduce pollution of water.

Mining operations must certify the completion of their SWMP, as described in this document. Implementation of the plan will be required at the time that coverage under the general permit begins. The Division reserves the right to request and review the plans, and to require additional measures to prevent and control pollution, as needed.

When preparing your plan, make sure to **address each item**. If it is not applicable to your site, briefly explain why. A simple "Not Applicable" is not enough. Also note that the SWMP should include any existing stormwater controls at your site, not just new or proposed ones. Take full credit for what you are already doing.

The SWMP shall include the following items, at a minimum:

1. Site Map

The plan shall provide a site map or maps which indicate at a minimum:

- ***Mining site boundaries***
- ***Access and haul roads***
- ***Stormwater outfalls and an outline of the drainage area of each stormwater outfall***
- ***An estimate of the direction of flow***
- ***Materials handling areas***
- ***Each existing structural control measure to reduce pollutants in stormwater runoff***
- ***Areas used for storage or disposal of overburden, materials, soils or wastes***
- ***Areas used for mineral milling and processing***
- ***Springs, streams, wetlands and other surface waters***
- ***Location of mine drainage or any other process water***
- ***Boundary of tributary area that is subject to effluent limitations***
- ***Date the map was prepared***

The drainage areas shown should include the portions of the site where industrial activities occur, as well as those portions contributing stormwater that mixes with runoff from the industrial area. Therefore, the entire drainage area where industrial activities occur must usually be included.

Aside from mining, industrial activities can include equipment washing, materials storage, vehicle maintenance or fueling, incineration, waste treatment, storage or disposal, shipping/loading/unloading, etc. You do not need to include industrial activities which only take place indoors, unless there is some part or aspect of the activity with which stormwater could come in contact. For example, if all vehicle maintenance is done indoors, but vehicle storage or fueling is outside, the vehicle storage or fueling area must be addressed.

It is a good idea to start with a portion of the USGS (U.S. Geological Survey) quadrangle map showing the site. These are available and easily obtainable for the entire state; they show a large amount of information for very little effort. You can then use the USGS map as a guide for preparing your site map, which will be more detailed. Regardless of the source of the base map, the site map needs to be of suitable scale to show the industrial portion of the facility and the features within it.

☐ Locations of stormwater outfalls:

If the site has a stormwater drainage system, the location of outfalls is a simple task. Indicate on the map where pipeline outfalls are, as well as the general layout of the drainage system such as inlets, grates, pipelines, etc. If stormwater is conveyed over land without a developed storm drainage system, the points where runoff collects and runs off must be located.

☐ Drainage basins for each outfall:

Field inspection can usually accomplish this task with acceptable accuracy. Look for high areas such as crests of parking lots, roads, etc. which would form the division between drainages. Gullies and swales are indicators of stormwater flow direction. Obviously, if runoff is observed during a storm, most uncertainties can be eliminated.

☐ Surface water bodies (including dry water courses):

Mark on the site map any surface water bodies, including lakes, streams, springs, wetlands, detention ponds, roadside or irrigation ditches, etc. These do not necessarily need to be within the facility, but may be adjacent to it or impacted by stormwater runoff. Also include any existing storm sewers.

☐ Existing structural control measures to reduce stormwater pollution:

Show on the map the location of any structural stormwater pollution control measures, such as detention ponds, diversion ditches, covered material storage areas, fuel farm secondary containment structures, etc.

In addition, there are several other features which could be included to make the SWMP a more comprehensive and usable plan. For example, later sections of the SWMP will include requirements for spill prevention procedures, which can include a site map showing where materials are stored. By including the following items on the site map, all information would be in one place on a single base map.

☐ Materials handling and loading areas

☐ Materials storage areas

☐ Paved and unpaved areas (for hydrologic assessments)

2. Description of Potential Pollutant Sources/Material Inventory

The plan shall provide a description of all potential sources (activities and materials) which may reasonably be expected to add pollutants to stormwater discharges. Such sources may include haul roads, equipment storage and maintenance areas, fuel storage areas, etc.

In each case where stormwater pollution potential exists, appropriate preventive measures must be taken and documented.

This section of the SWMP summarizes the existing potential for stormwater contamination at the site. It is a narrative description which states what is stored, where it is stored, how it is used, what has been used, etc. These can include such pollutants as fuels, oils, detergents, pesticides, herbicides, fertilizers, etc.

3. Stormwater Quality Controls

Each mining site covered by this plan shall develop a description of stormwater quality controls appropriate for that site, and implement such controls. The appropriateness and priorities of controls in the plan shall reflect identified potential sources of pollutants at the site. The description of stormwater quality controls shall address the following minimum components, including a schedule for implementing such controls:

This section of the SWMP, when completed, will spell out what the facility **is** doing to control stormwater pollution, what the facility **will** do in the future, **when** Best Management Practices (BMPs) will be implemented, and **who** at the facility is responsible for the plan.

- a) SWMP Administrator - The SWMP shall identify a specific individual or individuals within the mining organization who is responsible for developing the SWMP and assisting the mine operator in its implementation, maintenance, and revision.**

The SWMP Administrator becomes the contact for all SWMP-related issues and is the person responsible for its accuracy, completeness, and implementation. Therefore, the SWMP Administrator should be a person in an authoritative position. Larger facilities may want to develop a "SWMP team" in order to share the responsibilities and generate greater awareness and participation.

- b) Materials Handling and Spill Prevention - Where materials can impact stormwater runoff, BMPs that reduce the potential for contamination shall be described. For example, materials should be stored and handled in covered areas whenever possible to prevent contact with stormwater; fuels and other chemicals should be stored within berms or secondary containment devices to prevent leaks and spills from entering stormwater runoff.**

When selecting BMPs, the most important ones to evaluate first are those which limit the source of the pollutant. It is much more efficient, from both a cost and environmental standpoint, to prevent the pollution in the first place than to clean up contaminated stormwater. For example, a BMP requiring that any vehicle maintenance that involves fluid exchange must take place indoors, results in the removal of a pollutant source (i.e., oil/hydraulic fluids) from possible contact with stormwater.

Good housekeeping measures, such as cleaning and maintenance schedules, trash disposal and collection practices, grounds maintenance, etc., can be included here.

- c) Erosion and Sediment Controls - Describe BMPs that will be used to reduce erosion and prevent sediment delivery to State waters. These should include structural (such as silt fences, sediment ponds, drop structures, check dams) and non-structural (such as mulching and revegetation) methods.**

BMPs can describe a wide range of management procedures, schedules of activities, prohibitions or practices and other management practices. BMPs can include operating procedures, treatment requirements and practices to control plant site runoff, drainage from raw materials storage, spills or leaks. Nonstructural BMPs are mainly definitions of operational or managerial techniques. Structural BMPs include physical processes ranging from diversion structures to oil/water separators to retention ponds.

The BMPs selected are up to the judgment of the individual permittee. However, it is important to note that a fully implemented SWMP will constitute compliance with Best Available Technology (BAT) and Best Conventional Technology (BCT), as mandated under the Federal Clean Water Act. This means that, in order to comply with your permit, the appropriate measures **must** be taken in keeping with the pollutant(s) involved and the risk potential at the facility.

- d) Identification of Discharges other than Stormwater - The stormwater conveyance system on the site shall be evaluated for the presence of discharges other than stormwater, such as mine drainage, spoil springs, sanitary waste, or process water of any kind. The SWMP shall include a description of the results of any evaluation for the presence of discharges other than stormwater, the method used, the date of the evaluation, and the on-site drainage points that were directly observed during the evaluation.**

A number of discharges other than stormwater may not require a CDPS Industrial Wastewater Discharge permit and are considered Allowable Non-Stormwater Discharges. Flows from fire fighting activities, landscaping irrigation return flow or springs (except spoil springs) that are combined with stormwater discharges associated with industrial activity must be identified in the SWMP.

In other words, only stormwater can be conveyed by the stormwater drainage system. Examples of potential illicit connections include floor drains and toilets in maintenance buildings, chemical storage buildings, etc. There are several methods of determining whether or not illicit connections exist. Acceptable procedures include dry weather observations of outfalls or other appropriate locations, analysis and validation of accurate piping schematics, dye tests, etc.

Note - if illicit connections are discovered, corrective measures must be taken.